Mesozooplankton biomass distribution in the waters of the El Hierro Island, (Canary Islands, Spain) during March and October 2013

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Abstract

VULCANO project (Volcanic eruption at El Hierro island. Sensitivity and recovery of the marine ecosystem, CTM 2012-36317), funded by Feder and The Ministry of Economy and Competitiveness carried out two multidisciplinary oceanographic cruises on board R/V Ramón Margalef and R/V Ángeles Alvariño during March and October 2013 (VULCANO0313 and VULCANO1013).

Here, we present an initial report of the results of the mesozooplankton biomass in epipelagic waters (0-200 m depth) south of the island of El Hierro (Canary Islands, Spain) and marine influence zone of the shallow submarine eruption which took place in October 2011.

The results, expressed like wet weight, dry weight, ashes, organic matter and %C (in mg/m^3), shown for the first cruise, Vulcano3013, that the higher values were found in the South of El Hierro instead of the rest of the whole island. A size speciation ultra resolution study was carried out around the volcano. In this area, located between the stations 50 - 61, high values were also found. Around the volcanic crater, the values obtained were 4.32 mg/m^3 (dry weight), 2.85 mg/m^3 (organic matter) and 1.73 mg/m^3 (%C) at station 58; and 13.56 mg/m^3 (dry weight), 8.72 mg/m^3 (organic matter) and 5.43 mg/m^3 (%C) at station 56; where the submit of the volcano is located.

During the second cruise of the year, Vulcano1013, the distribution of the general biomass was quite similar. However, the volcanic area observed an important decreases of the biomass, with values around 2.04 mg/m^3 (dry weight) 1.91 mg/m^3 (organic matter) and 0.81 mg/m^3 (%C) at station 50 and 4.36 mg/m^3 (dry weight) 4.11 mg/m^3 (organic matter) and 1.70 mg/m^3 (%C) at station 56 (volcanic submit).

The results obtained during the last cruise of the project, March 2013, will be essential in order to see how important is the time factor in the differences found between the stations located in the size speciation ultra resolution study during the two oceanographic cruises carried out at the moment.